

# Microsoft<sup>®</sup> **Exchange** 2000 **Server**

## **Mailbox Recovery for Microsoft Exchange 2000 Server**

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# Table of Contents

<b>Introduction</b> .....	<b>1</b>
<b>Protecting Mission-Critical Mailboxes</b> .....	<b>1</b>
<b>Mailbox Recovery Scenarios</b> .....	<b>1</b>
Recovering a Deleted Mailbox .....	2
Configure a Deleted Mailbox Retention Period.....	2
Reconnect a Deleted Mailbox to a New User Object .....	3
Recovering a Mailbox from Backup .....	4
Considerations Before Restoring a Mailbox from Backup.....	4
Procedures for Recovering an Exchange 2000 Mailbox from Backup.....	6
Changing the LegacyExchangeDN Value on a Recovery Server.....	12
<b>Additional Resources</b> .....	<b>18</b>



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Published: July 2002

For the latest information, see <http://www.microsoft.com/exchange/>

## Introduction

This article is designed to help you recover Microsoft® Exchange 2000 Server mailboxes. You will learn how to recover deleted mailboxes. You will also learn how to restore one or more damaged mailboxes from backup media to a separate server and then reconnect those mailboxes to the original server.

Before you learn about these mailbox recovery methods, you must first understand how to protect mission-critical mailboxes from potential disaster.

## Protecting Mission-Critical Mailboxes

The first way to provide additional protection for the mission-critical mailboxes in your company is to partition the mission-critical mailboxes in your organization in their own database. If any of the mission-critical mailboxes are damaged, you can simply restore the database that contains those users' mailboxes. This makes restoring the damaged database easier and faster than having to restore a very large database of many users. It is also much easier to restore one database on a server than it is to recover a single mailbox from backup. For these reasons, you should locate your most important mailboxes (for example, the mailboxes of the executives of your company) in their own database.

Another way to protect mailboxes is to back up your mission-critical mailboxes using the Exchange 2000 EXMERGE utility. EXMERGE and other Exchange 2000 utilities are available on the Exchange 2000 CD-ROM, or from the [www.microsoft.com/exchange](http://www.microsoft.com/exchange) Web site. Use EXMERGE to back up mailboxes for individual users, and do this as part of your backup routine. EXMERGE backs up the .pst file for each user's mailbox. This utility can be configured to back up the contents of one or more mailboxes in your company. For example, you may only want to use EXMERGE to back up the .pst files for the executives in your company. When you have an EXMERGE backup of a user's .pst file, you restore a user's mailbox by copying that user's .pst file on a specific location on that user's hard disk.

## Mailbox Recovery Scenarios

The first scenario presented here involves using a feature of Exchange 2000 to recover a deleted mailbox. The second scenario involves recovering a mailbox and moving it to an offline recovery server from a previous backup.

## Recovering a Deleted Mailbox

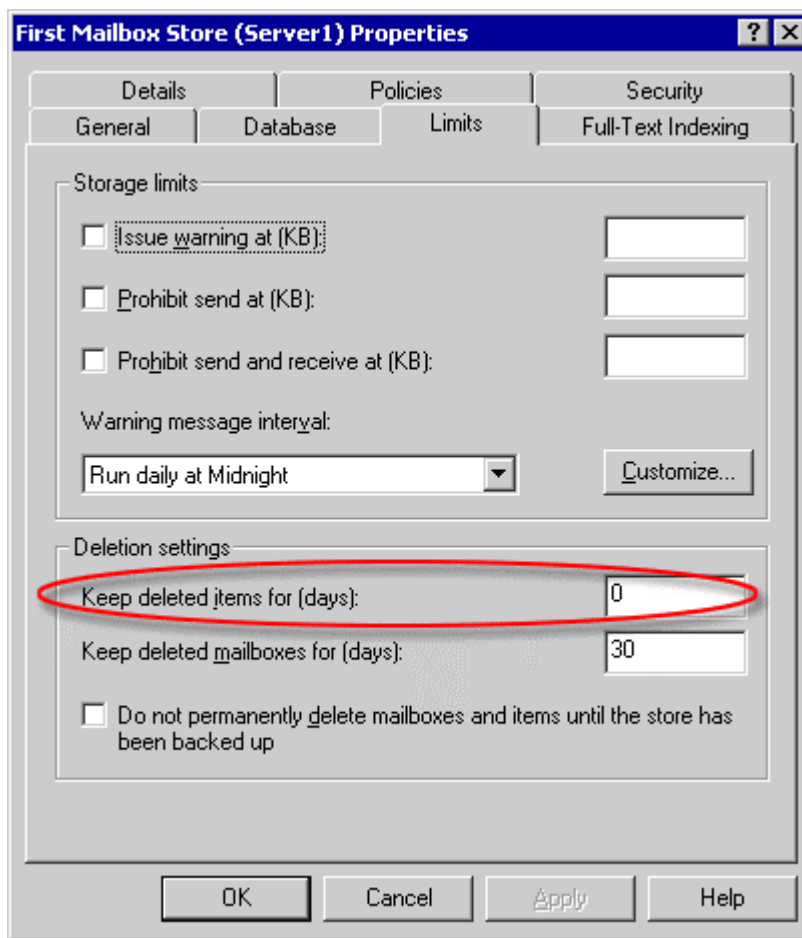
If you mistakenly delete a mail-enabled user account, you can recreate that user object and then, by default, reconnect that mailbox for a period of 30 days. This is because when you delete a user, Exchange retains a users mailbox for a specified period.

You configure Exchange to retain a user's mailbox in the way that you specify how many days Exchange retains mail that a user deletes. You configure a deleted-mailbox retention period at the mailbox store object level.

## Configure a Deleted Mailbox Retention Period

### To configure a deleted mailbox retention period

1. In System Manager, navigate to the mailbox store group for which you want to configure a deleted-mailbox retention period.
2. Right-click that mailbox store, and then click **Properties**.
3. On the **Limits** tab, type the number of days you want Exchange to retain deleted mailboxes in **Keep deleted mailboxes for (days)**.



**Figure 1** Configuring a deleted mailbox retention period

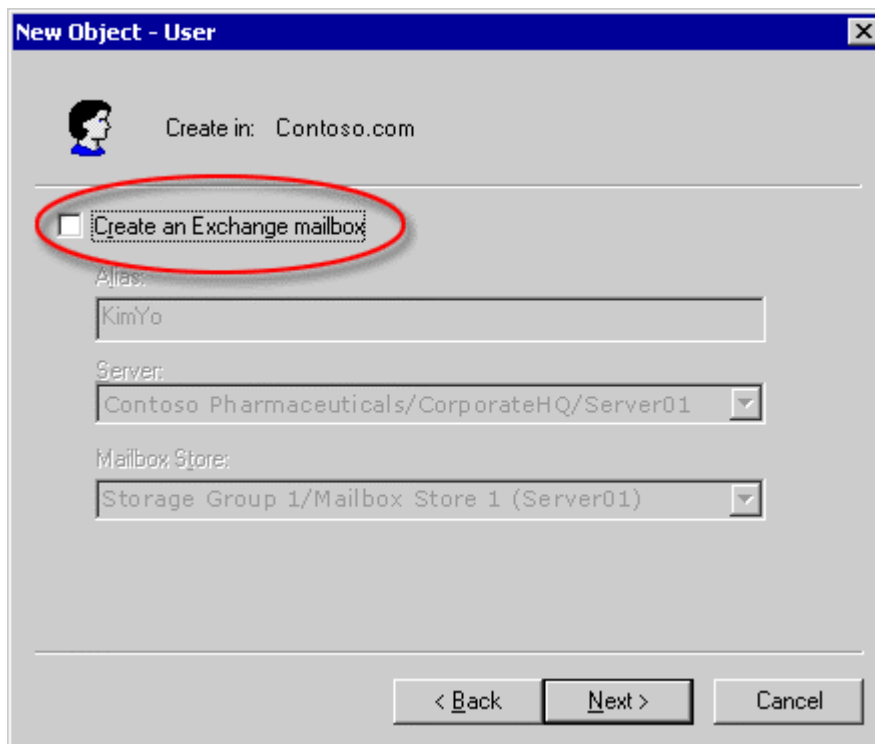
## Reconnect a Deleted Mailbox to a New User Object

If you delete a user account, the user's mailbox is not actually deleted until the deleted-mailbox retention period expires. The following procedure outlines the steps for reconnecting a mailbox. In the following example, Kim Yoshida is a mailbox-enabled user that you previously deleted, and you are within the 30-day deleted mailbox retention period.

### To reconnect a deleted mailbox to a new user object

1. From Active Directory Users and Computers, create a new user object for Kim Yoshida.

**Important** When you create the new user object, clear the **Create an Exchange Mailbox** check box. This is to create a new Microsoft Windows® 2000 account without creating a corresponding Exchange mailbox. You will connect this user account to a mailbox later in this procedure.



**Figure 2** Re-creating the user object without creating an Exchange mailbox

2. From Exchange System Manager, navigate to the mailbox store on which Kim Yoshida's mailbox is located.
3. In the details pane, locate the mailbox for Kim Yoshida.

**Note** Verify that the mailbox icon appears with a red **X**. Mailboxes that display with a red **X** are mailboxes that have been deleted but will be retained in the mailbox store until the deleted mailbox retention period expires.

4. Right-click the mailbox named **Kim Yoshida**, and then click **Reconnect**.

5. In **New User for this Mailbox**, select the new user object you created for Kim Yoshida, and then click **OK**.

## Recovering a Mailbox from Backup

The method used to recover Exchange mailboxes in Exchange 2000 is very similar to the one used with previous versions of Exchange. That method involves restoring an entire server database from backup to an offline recovery server, reconnecting a single mailbox to a user account, and then extracting the contents of the mailbox to the original production server.

**Note** If you have used EXMERGE to back up individual .pst files, or if you have used a third-party backup utility to extract the data from a single mailbox to a separate backup, you can use those methods to recover individual mailboxes.

The entire database must be restored because Exchange mailbox stores and public folder stores perform better when you consolidate all data into a small number of database files, rather than managing numerous files containing individual mailboxes or messages.

## Considerations Before Restoring a Mailbox from Backup

The requirements and procedures you must follow to recover an Exchange 2000 mailbox are not identical to those you use to recover a mailbox from previous versions of Exchange (for example, Microsoft Exchange Server 5.5), but the requirements and procedures are similar in principle. These requirements involve creating a recovery server environment that is very similar in naming structure to the original server (including using the same names for information stores, databases, and so forth), restoring the Exchange database that contains the mailbox you want to restore to that server, and then extracting the mailbox or mailboxes from the recovery server.

You should familiarize yourself with some of the requirements and procedures for recovering a mailbox located on an Exchange 5.5 server before learning about the requirements and procedures for recovering an Exchange 2000 mailbox.

## Understanding Exchange 5.5 Mailbox Recovery

When restoring a mailbox to an Exchange 5.5 recovery server, install Exchange on the recovery server by using the same logical organization and site names. The server names and service accounts do not have to match, unless you are restoring the directory service database. Exchange 5.5 servers on a site become aware of each other during the installation process, specifically, when you join a new server to a site.

Therefore, you can install a recovery server on the same network with live production Exchange servers, and the two systems will be unaware of each other, as long as you do not join the recovery server to the production site during installation.

**Caution** You should not uninstall a live Exchange 5.5 server and then use it as your recovery server while the server is still logically joined to the site—while the server name is still visible as a site member in the Exchange 5.5 Administrator program. If that happens, other servers on the site will try to communicate with the

recovery server and may rejoin the recovery server to the live site. Always give recovery servers names that are different from those already on the site, or perform recovery on a network not connected to the live system.

When an Exchange 5.5 recovery server is created, the Exchange directory database on the recovery server has no information about the mailboxes that have been restored to the Exchange 5.5 server database. To populate the directory, and thus make the mailboxes client-accessible, create a mailbox account for each user, with the same directory name as in the live system, or use the Administrator program's DS/IS consistency adjuster function to create the accounts in bulk.

Then you can use various methods to recover mailbox data, including logging on to the mailbox with an ordinary client application, or using EXMERGE to extract mailbox data automatically to .pst files.

## Understanding Exchange 2000 Mailbox Recovery

Recovering an Exchange 2000 mailbox is somewhat different from recovering an Exchange 5.5 mailbox. There is no dedicated Exchange directory database in Exchange 2000 because Exchange directory information is now stored in Active Directory. Therefore, install both Exchange 2000 and Active Directory on your recovery server.

To sufficiently isolate the recovery server from other Exchange servers in the production organization, you must install Active Directory as the root of a separate forest. It may also be necessary to configure the recovery server as a Domain Name System (DNS) server if the corporate DNS server's permissions model denies you the rights to create necessary service records in it.

The process for matching the names of your recovery server to those of your original Exchange server is different in Exchange 2000. While an Exchange 5.5 recovery server needs only to match up organization and site names with the original system, in Exchange 2000 you must match all the following:

- Organization name
- Administrative group name
- Storage group name
- Logical database name
- LegacyExchangeDN attributes on critical system objects

You should already be familiar with the terms "organization," "administrative group," "storage group," and "logical database." You may not be familiar with the term "LegacyExchangeDN attribute." When recovering a mailbox to a recovery server, you must know the LegacyExchangeDN attribute of the administrative group that contains the mailbox you want to recover. The LegacyExchangeDN attribute is carried by almost all Exchange 2000 objects, including mailbox-enabled users. It identifies Exchange objects in ways that match Exchange 5.5 naming. A typical LegacyExchangeDN value is of the form:

*/O=<Organization name>/OU=<Site name>/CN=<Container name>/CN=<Object name>*

If the mailbox you want to recover exists on an administrative group named *First Administrative Group*, and is not on an upgraded Exchange 5.5 server, the name of your LegacyExchangeDN is /O=<Organization name>/OU=First Administrative Group. But when the administrative group is named anything other than First Administrative Group, or when the mailbox you want to recover is on an administrative group that was formerly part of an Exchange 5.5 site, you need to determine the name of the LegacyExchangeDN value. Also, when you rename an administrative group, the site portion of the LegacyExchangeDN value is not updated with the new administrative group name. If so, serious problems occur with mail delivery and replication with Exchange 5.5 servers in the organization.

**Important** If the LegacyExchangeDN values on the recovery server do not match the LegacyExchangeDN attributes of your production server (the server on which you performed the database backups), you must change the LegacyExchangeDN attribute values on your recovery server to match those on your production system. You change the LegacyExchangeDN attributes after installing Exchange 2000 on your recovery server, and before starting the mailbox stores and public folder stores.

- For more information about identifying the LegacyExchangeDN value and determining if you need to change that value, see Step 1 and Step 2 in the following section "Procedures for Recovering an Exchange 2000 Mailbox from Backup."
- For information about the four methods you can use to change the LegacyExchangeDN value, see "Changing the LegacyExchangeDN Value on a Recovery Server" later in this article.

It is not necessary to match Active Directory naming between the recovery server and the production server. While you must install a separate Active Directory forest, you can still run the recovery server on your live network.

## Procedures for Recovering an Exchange 2000 Mailbox from Backup

The procedures in this section explain how to recover an Exchange 2000 mailbox from backup to an offline recovery server.

### To recover an Exchange 2000 mailbox from backup

1. Determine and then record all of the following logical names needed to recover the database:
  - The Exchange 2000 organization name
  - The administrative group name to which the database belongs
  - The storage group name to which the database belongs
  - The logical database name
  - The LegacyExchangeDN value of the administrative group to which the database belongs

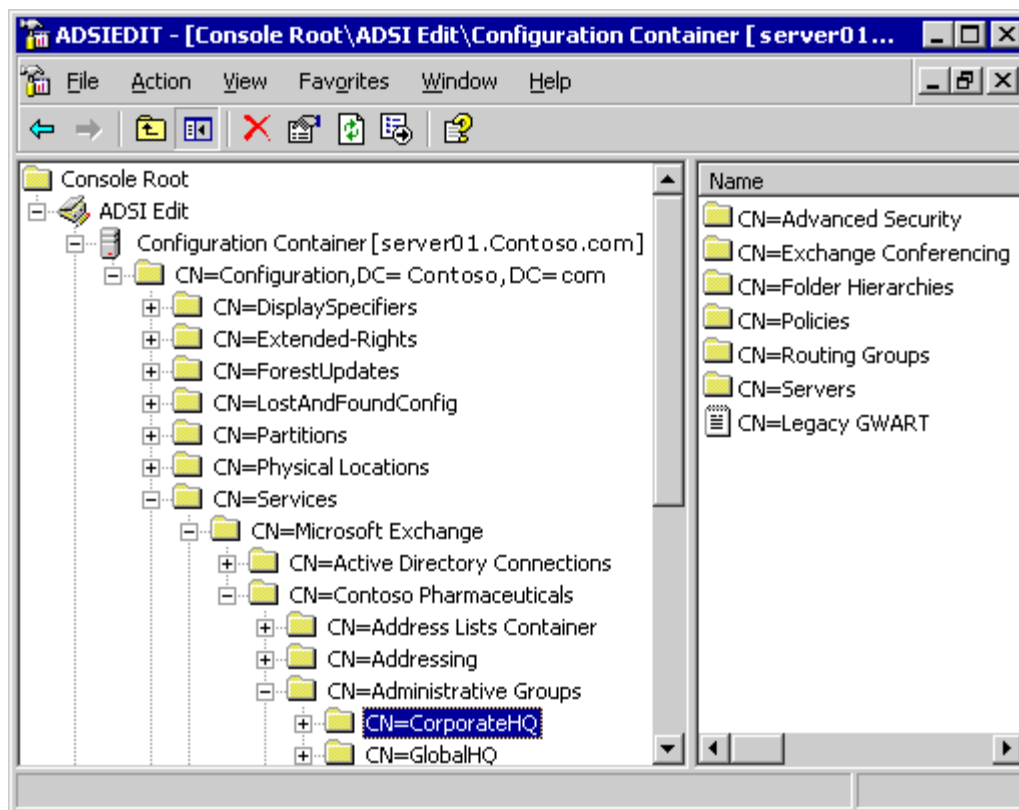
It is relatively easy to determine the names of the first four items in this list. It is more difficult to determine the fifth item, the LegacyExchangeDN. There are several ways to find the LegacyExchangeDN of the administrative group. The LegacyExchangeDN value has the following form:

*/O=<Organization name>/OU=<Administrative group name>*

There are three ways to determine the **LegacyExchangeDN** value:

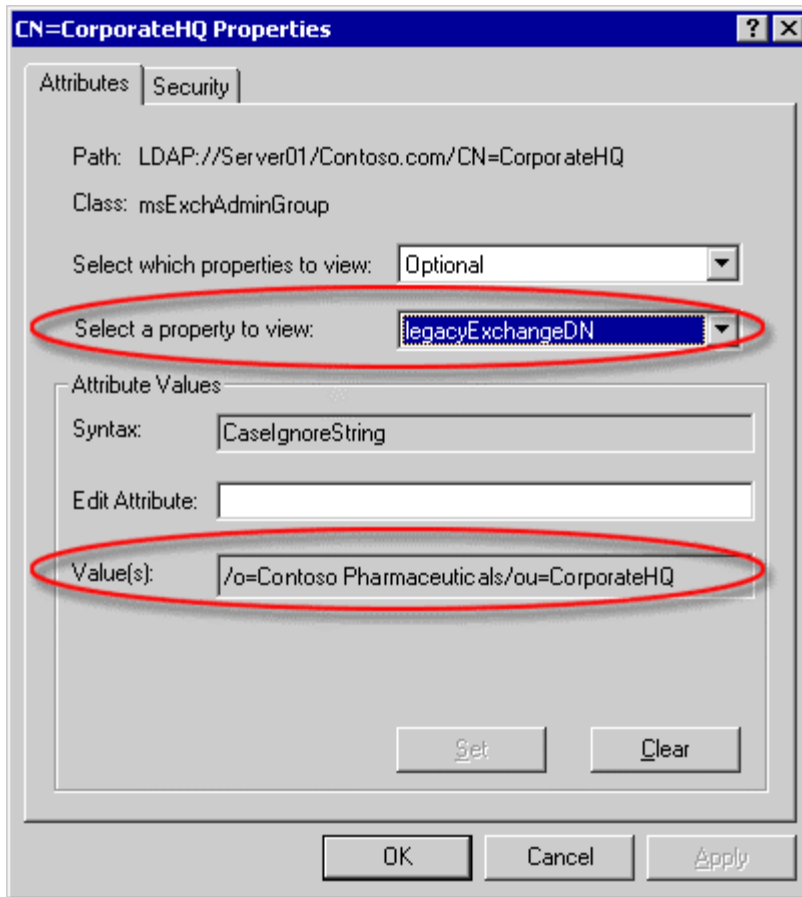
- You can determine the LegacyExchangeDN value using the LegacyDN utility in read-only mode. For information about using LegacyDN, see "Changing the LegacyExchangeDN Values Using LegacyDN" later in this article.
- You can determine the LegacyExchangeDN value using ADSIEDIT or LDP. ADSIEDIT and LDP are Windows 2000 support tools located in the \Support\Tools folder of the Windows 2000 Server CD-ROM. The LegacyExchangeDN value is listed within the properties of the administrative group object. In ADSIEDIT, the administrative group object is found in the **Configuration Container** by expanding in the following order:
  - CN=Services
  - CN=Microsoft Exchange
  - CN=<Organization Name>
  - CN=Administrative Groups
  - CN=<Administrative Group Name>

Figure 3 shows how to find the administrative group "CorporateHG," when "Contoso.com" is the root domain name and "Contoso Pharmaceuticals" is the name of the Exchange organization.



**Figure 3** Accessing the administrative group in **ADSI Edit**

To view the LegacyExchangeDN value, double-click **CN=<Administrative Group Name>**, where *Administrative Group Name* is the name of the administrative group to which you want to determine the LegacyExchangeDN. In the **CN=<Administrative Group Name> Properties** dialog box, on the **Attributes** tab, in **Select a property to view**, click **legacyExchangeDN**. The legacyExchangeDN value appears in the **Value(s)** box (Figure 4).



**Figure 4** Viewing the legacyExchangeDN value in ADSIEDIT

- You can determine the LegacyExchangeDN value using the LDIFDE utility.

To use LDIFDE, you must obtain the full DNS domain name of the root domain in your Active Directory forest, the Exchange organization name, and the administrative group name.

**Note** The domain name you want is not necessarily the domain name to which the Exchange 2000 server belongs, but rather the root domain name of the entire forest.

In the following example, the root domain in the forest is corp.mycompany.com, the Exchange organization name is Corp1, and the administrative group name is Headquarters. The full-distinguished pathname in Active Directory to the Headquarters object is:

- CN=Headquarters
- CN=Administrative Groups
- CN=Corp1
- CN=Microsoft Exchange
- CN=Services
- CN=Configuration

- DC=corp
- DC=mycompany
- DC=com

An LDIFDE command line, such as the following, displays the administrative group object on screen. (The command line syntax must be entered as a single line, but here it is wrapped for readability.)

```
LDIFDE -f CON -d "CN=Headquarters,CN=Administrative
Groups,CN=Corp1,CN=Microsoft
Exchange,CN=Services,CN=Configuration,DC=corp,DC=mycompany,DC=com" -
l legacyExchangeDN -p Base
```

This LDIFDE command gives you output similar to this:

```
dn: CN=Headquarters,CN=Administrative Groups,CN=Corp1,CN=Microsoft
Exchange,CN=Services,CN=Configuration,dc=corp,dc=mycompany,dc=com
changetype: add
legacyExchangeDN: /O=Microsoft/OU=Headquarters
```

2. Use the LegacyExchangeDN value you found in Step 1 to determine if you will need to change the LegacyExchangeDN values on your recovery server as part of your mailbox recovery.

**Important** To successfully recover a database to a recovery server, the LegacyExchangeDN values of objects on the recovery server must match the LegacyExchangeDN values on the server on which you performed the original database backups.

- If the OU= portion of the LegacyExchangeDN value you found in Step 1 is "First Administrative Group," there is no need to change any LegacyExchangeDN values on the recovery server.
- If the OU= value you found in Step 1 is not "First Administrative Group," you must change the LegacyExchangeDN values on the recovery server. You must modify the LegacyExchangeDN values of objects on the recovery server to match the LegacyExchangeDN values on the server on which you performed the original database backups.

For example, if in Step 1, you determined the OU= portion of the LegacyExchangeDN value to be "Headquarters," you must change the LegacyExchangeDN values on the recovery server.

3. Install Microsoft Windows 2000 Server on the recovery server, and then run DCPROMO to install Active Directory on the recovery server. Ensure that you create a new forest for your recovery server topology.
4. Install and configure DNS if necessary. You can also establish a two-way trust with your production system and grant necessary access to write needed DNS information from your recovery server to your existing DNS.

**Note** For more information on configuring DNS, see your Windows 2000 Server documentation.

5. Install Exchange 2000, using the same organization name as used in the production system.
6. Change the name of the **LegacyExchangeDN** value, if applicable.
  - For information about determining if you need to change the LegacyExchangeDN value, see Step 2 of this procedure.
  - For information about the four methods you can use to change LegacyExchangeDN, see "Changing the LegacyExchangeDN Value on a Recovery Server," later in this document.
7. Create a storage group with the same logical name as the production storage group from which the database backup was taken. If the database was taken from the default **First Storage Group**, you do not have to rename or create another storage group.
8. Create logical database names in the storage group to match the original names. Right-click the database to rename, and then click **Rename**. For example, if the database you are restoring is called "Mailbox Store 1A (Server 1)," you can rename the default mailbox store from "Mailbox Store" to "Mailbox Store 1A (Server 1)." This is easier than creating a new database.

**Note** You do not have to match actual database filenames, unless you are restoring offline backups. Even differences in log file prefixes are handled when restoring an online backup.

9. Dismount the database to be restored. Then, in System Manager, in the properties of the database you are restoring, select the **This database can be overwritten by a restore** check box.
10. Use Windows 2000 to restore the database that contains the mailbox you want to recover from backup. Ensure that you select the **Last Backup Set** check box when restoring the last online backup set. If you fail to select this checkbox, you must run ESEUTIL /CC against the restored files before the database will start.
11. Start the database that you restored from backup.
12. In System Manager, navigate to the database you restored from backup, right-click **Mailboxes**, and then click **Run Cleanup Agent**. After **Run Cleanup Agent** runs, a red **X** appears on mailboxes that are not currently linked to an Active Directory account.
13. Create a non-mailbox-enabled Active Directory user account for each mailbox that you want to recover from backup by using one of the following methods:
  - **Method One** Manually create user objects using Active Directory Users and Computers. When creating the new user accounts, clear the **Create an Exchange mailbox** check box on the third screen of the New Object - User wizard. You will connect this user account to the mailbox you restored from backup later in this set of procedures.
  - **Method Two** Use MBCONN to create Active Directory user accounts. MBCONN and other Exchange 2000 utilities are available on the Exchange 2000 CD-ROM,

or from the [www.microsoft.com/exchange](http://www.microsoft.com/exchange) Web site. MBCONN is helpful if you have more than one user account to reconnect to mailboxes. For more information about MBCONN, see Microsoft Knowledge Base article [Q271886](http://Q271886) "XADM: How to Use the Mbconn Utility to Generate Active Directory Accounts for Information Store Mailboxes."

14. Link mailboxes to Active Directory users by using one of the following methods:

- **Method One** Manually link an individual mailbox to an Active Directory user, following the procedures shown in "Reconnect a Deleted Mailbox to a New User Object," earlier in this document.
- **Method Two** Use MBCONN to link Active Directory user accounts to mailboxes. This is especially helpful if you have multiple user accounts to reconnect to Exchange 2000 mailboxes. For more information about MBCONN, see Microsoft Knowledge Base article [Q271886](http://Q271886) "XADM: How to Use the Mbconn Utility to Generate Active Directory Accounts for Information Store Mailboxes."

15. Extract the contents of the mailbox to the original server by using one of the following methods:

- **Method One** Manually log on to the recovery server as the Active Directory user, copy the contents of the .pst file for that mailbox, and then transfer that .pst file to the mailbox on the original server.
- **Method Two** Use EXMERGE to transfer the contents of the mailbox from the recovery server to the original server. EXMERGE converts the mailbox contents into a .pst file format, transfers it to the original server, and then converts it to Exchange 2000 mailbox format.

**Important** You must have **Receive as** rights for the database that you are attempting to transfer mailboxes. You must have this before you can use EXMERGE to move the contents of the mailboxes. You can grant yourself those rights from the database object in System Manager.

## Changing the LegacyExchangeDN Value on a Recovery Server

As explained in the section "Understanding Exchange 2000 Mailbox Recovery," earlier in this article, it may be necessary to change the name of the LegacyExchangeDN value on your recovery server to perform a mailbox recovery. In general, you must change the LegacyExchangeDN value if the mailbox you want to recover was located on a server that was upgraded from Exchange 5.5, or if the administrative group was originally named anything but First Administrative Group (which occurs when you create a second administrative group). For more information about determining whether you need to change those values, see Step 2 in the "Procedures for Recovering an Exchange 2000 Mailbox from Backup" section earlier in this article.

You can use one of the following four methods to change LegacyExchangeDN after installing Exchange 2000 on the recovery server, and before restoring the Exchange databases.

- Changing the LegacyExchangeDN values using LegacyDN

- Manually change LegacyExchangeDN values
- Upgrading from Exchange 5.5 Server
- Using two-server recovery

For detailed procedures about recovering a mailbox, see the section "Procedures for Recovering an Exchange 2000 Mailbox from Backup" earlier in this article.

## Changing the LegacyExchangeDN Values Using the LegacyDN Utility

You can use the LegacyDN utility (LegacyDN.exe) to view LegacyExchangeDN values, change Exchange 2000 organization names, change Exchange 2000 administration group names, and change LegacyExchangeDN values.

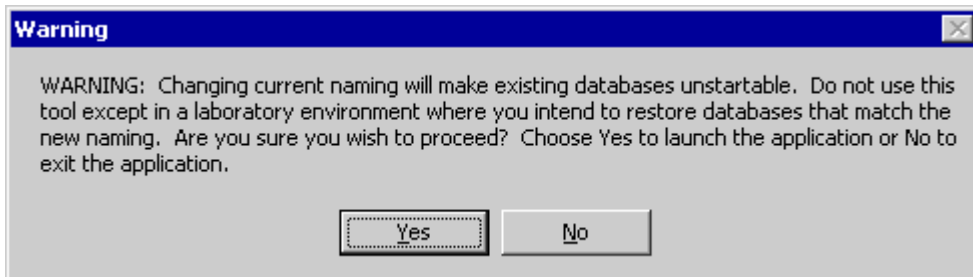
**Note** For detailed information about the LegacyDN utility, see **readme4legacydn.txt** in the **\support\utils\i386\LegacyDn** directory of the latest Exchange 2000 Server service pack.

### To change LegacyExchangeDN values using the LegacyDN utility

1. To start the LegacyDN utility, double-click **LegacyDN.exe**.

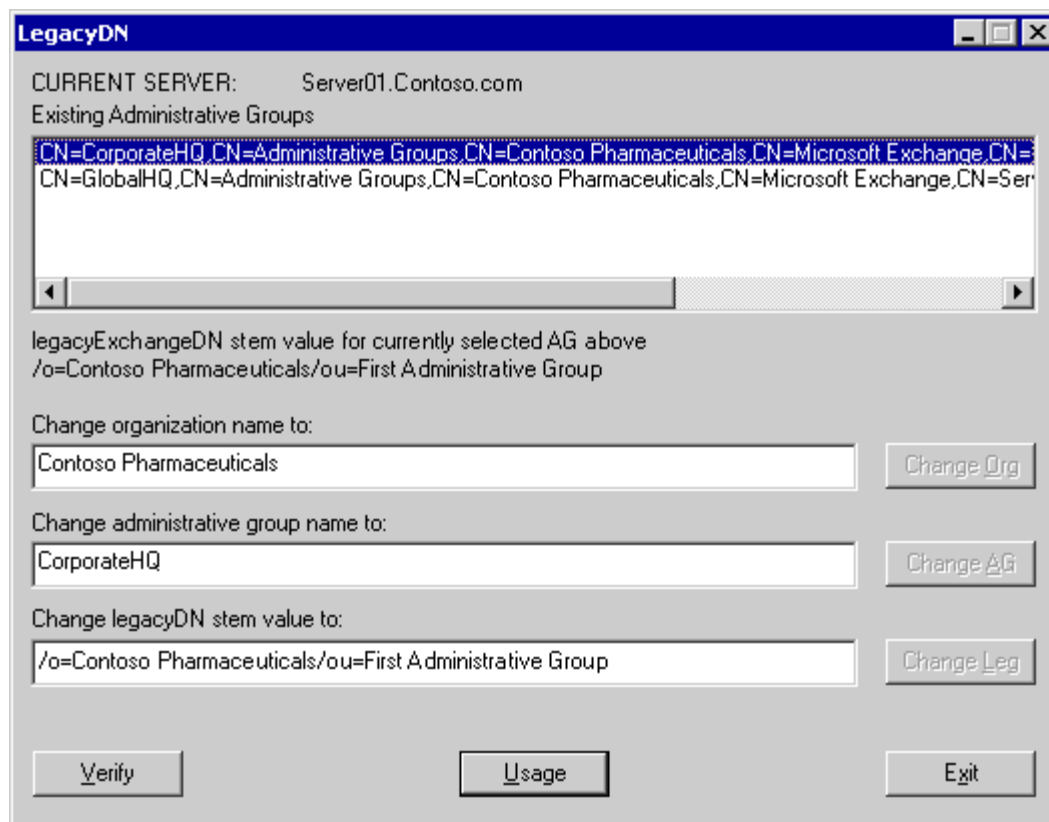
**Note** The LegacyDN utility is located on the latest Exchange 2000 Server service pack, in the **\support\utils\i386\LegacyDn** directory.

2. In the **Warning** dialog box, after reading and agreeing to the warning, click **Yes** (Figure 5).



**Figure 5** Agreeing to the **Warning** dialog box upon starting the LegacyDN utility

3. After agreeing to the warning, the LegacyDN utility automatically scans the nearest domain controller for existing administrative groups. In the **LegacyDN** dialog box, in the **Existing Administrative Groups** list, the list of existing administrative groups appears (Figure 6).



**Figure 6** Selecting an administrative group in the **LegacyDN** utility

4. Ensure you are not running LegacyDN in read-only mode. You are in read-only mode if **READ ONLY MODE** displays in the **LegacyDN** dialog box, above **Verify**. You cannot change the LegacyExchangeDN values in read-only mode. If you are in read-only mode, ensure that there is only one domain controller in your recovery environment, and then attempt this procedure again.
5. In the **LegacyDN** dialog box, in the **Existing Administrative Groups** list, select the administrative group that contains the LegacyExchangeDN values you want to change. For example, if the mailbox you want to recover is in the Headquarters administrative group, select **Headquarters**.

Selecting an administrative group populates **Change organization name to**, **Change administrative group to**, and **Change legacyDN stem value to** with values that reflect the selected administrative group.

In **Change legacyDN stem value to**, delete the existing LegacyExchangeDN value, and then type the LegacyExchangeDN value that you determined in Step 1 of "Procedures for Recovering an Exchange 2000 Mailbox from Backup" earlier in this article. For example, if you determined that the LegacyExchangeDN value of the administrative group was /O=Microsoft/OU=Headquarters, delete the default value **OU/=First Administrative Group**, and type **/O=Microsoft/OU=Headquarters**.

**Note** You can also use LegacyDN to change the organization and administrative group names. For more information, see **readme4legacydn.txt** in the **\support\utils\i386\LegacyDn** directory on the latest Exchange 2000 Server service pack.

6. To verify that the **LegacyExchangeDN** stem values match for all objects in the administrative group, click **Verify**.
  - If the **Operation successful** dialog box displays with the message **All objects in the selected AG have been successfully verified**, proceed to Step 7 (Figure 7). The results of the verification process are recorded in the LegacyDN.dn log file. (LegacyDN creates this log file in the directory from which Legacydn.exe was run.)



**Figure 7** The **Operation successful** dialog box

- If the verify operation is not successful, examine the errors recorded in the LegacyDN.dn log file. Resolve any errors, and then click **Verify** again. You must resolve all errors and receive the **All objects in the selected AG have been successfully verified** message before proceeding to Step 7.
7. Click **Change Leg** modify the existing values.

## Manually Change LegacyExchangeDN Values

Before you manually change the **LegacyExchangeDN** values, you must first determine the name of the **LegacyExchangeDN** attribute for the administrative group in which you want to recover a mailbox. To determine the name of the **LegacyExchangeDN** value, see Step 1 in "Procedures for Recovering an Exchange 2000 Mailbox from Backup," earlier in this article.

### To manually change the LegacyExchangeDN values

1. To change the name of the First Administrative Group on your recovery server (to match your production administrative group), open System Manager, right-click **First Administrative Group**, click **Rename**, and then type the name of the administrative group.
2. Do an LDIFDE export, with a command line similar to the following:

```
ldifde -f e:\legacy.ldf -d "CN=Microsoft
Exchange,CN=Services,CN=Configuration,DC=microsoft,DC=com" -l
legacyexchangedn -p subtree -r "(legacyexchangedn=*First*)"
```

This should give you an export file with several entries similar to the following:

```
dn: CN=SMTP (CHANI-{F95BFE21-D28D-4060-BC92-
41F10C940A46}),CN=Connections,CN=Microsoft,CN=Microsoft
Exchange,CN=Services,CN=Configuration,DC==microsoft,DC=com
changetype: add
```

```
legacyExchangeDN:  
  /o=Microsoft/ou=First Administrative  
  Group/cn=Configuration/cn=Connections/cn  
  =SMTP (CHANI)/cn={F95BFE21-D28D-4060-BC92-41F10C940A46}
```

3. Change each entry to something similar to the following:

```
dn: CN=SMTP (CHANI-  
41F10C940A46}), CN=Connections, CN=Microsoft, CN=Microsoft  
Exchange, CN=Services, CN=Configuration, DC=DUNE, DC=extest, DC=microsoft, DC  
=com  
changetype: modify  
replace: legacyExchangeDN  
legacyExchangeDN:  
  /o=Microsoft/ou=NEW ADMINISTRATIVE GROUP  
  NAME/cn=Configuration/cn=Connections/cn=  
  SMTP (CHANI)/cn={ F95BFE21-D28D-4060-BC92-41F10C940A46}  
-
```

There is a dash at the end of each modified entry, and you must be sure to leave a blank line after the dash before starting the next entry—and to leave a blank line at the very bottom of the file after the final dash.

The easiest way to change the file is with a text editor that can perform a search and replace operation across line breaks, thus replacing:

```
Changetype: add  
with  
Changetype: modify  
Replace: legacyExchangeDN
```

And then replace the First Administrative Group name with the new administrative group name.

**Note** Even if you must modify each record manually, there are typically less than a dozen records that require modification.

After the import file is generated, import it back into Active Directory with this command:

```
ldifde -i -f legacy.ldf
```

4. Run the original LDIFDE command again to make sure you didn't miss any entries and that the import was successful—this time it should find 0 matches.
5. Follow the rest of the recovery instructions in “Procedures for Recovering an Exchange 2000 Mailbox from Backup,” earlier in this article.

## Upgrading from Exchange 5.5 Server

Before you upgrade from Exchange 5.5 Server to ensure proper **LegacyExchangeDN** values, you must first determine the name of the **LegacyExchangeDN** attribute for the administrative group in which you want to recover a mailbox. To determine the name of the **LegacyExchangeDN** value, see Step 1 in "Procedures for Recovering an Exchange 2000 Mailbox from Backup," earlier in this article.

### To ensure proper LegacyExchangeDN naming by upgrading from Exchange 5.5:

1. Install an Exchange 5.5 server on your recovery domain controller, using the same organization name used in your Exchange 2000 system, and the same site name used for the administrative group to which the database belongs. Make the Domain Admins account the service account.
2. Change the Lightweight Directory Access Protocol (LDAP) port to 390 in the Exchange 5.5 Administrator program. This will prevent the LDAP service in Exchange 5.5 from conflicting with Active Directory.
3. Install Active Directory Connector (ADC).
4. Create a one-way connection agreement from Exchange to Windows. When configuring the connection agreement, set the Exchange LDAP port to 390. When specifying the containers, specify to export from the Exchange 5.5 **Recipients** container and to the Active Directory **Users** container. This connection agreement must exist before the upgrade can succeed.
5. Upgrade Exchange 5.5 to Exchange 2000.
6. When the upgrade is complete, you can follow the recovery instructions from "Procedures for Recovering an Exchange 2000 Mailbox from Backup," earlier in this article.

## Using Two-Server Recovery

Before you use two servers for ensure proper **LegacyExchangeDN** values, you must first determine the name of the **LegacyExchangeDN** attribute for the administrative group in which you want to recover a mailbox. To determine the name of the **LegacyExchangeDN** value, see Step 1 in "Procedures for Recovering an Exchange 2000 Mailbox from Backup," earlier in this article.

### To ensure proper LegacyExchangeDN naming by using the two-server recovery method

1. On the first recovery server, install Windows 2000 Server, and then run the Active Directory Installation Wizard. Ensure that you create a new forest for your recovery server topology.
2. On the first recovery server, install Exchange 2000 Server. Use logical naming that matches your Exchange organization.
3. On the first recovery server, create a second administrative group with the same logical name as the administrative group you are restoring.

4. On the second recovery server, install Windows 2000 Server, and do not run the Active Directory Installation Wizard.
5. On the second recovery server, install Exchange 2000 Server. You must install this Exchange 2000 Server in the second administrative group.
6. Follow the recovery instructions in "Procedures for Recovering an Exchange 2000 Mailbox from Backup," earlier in this article.

## Additional Resources

The following technical papers and Microsoft Knowledge Base articles provide valuable information regarding Exchange 2000 disaster recovery and mailbox recovery concepts and processes.

- *Exchange 2000 Server Disaster Recovery*  
<http://go.microsoft.com/fwlink/?LinkId=1714>
- *Exchange 2000 Server Database Recovery*  
<http://go.microsoft.com/fwlink/?LinkId=6273>
- *Mailbox Recovery for Microsoft Exchange 2000 Server*  
<http://go.microsoft.com/fwlink/?LinkId=5216>
- *Exchange 2000 Server Disaster Recovery: Worst-Case Survival Handbook*  
<http://go.microsoft.com/fwlink/?LinkId=6276>
- *Microsoft Exchange 5.5 Disaster Recovery*  
<http://go.microsoft.com/fwlink/?linkid=6277>
- [Q273863](#) - XADM: How to Change the legacyExchangeDN Attribute in Native Mode with ADSI Edit
- [Q274343](#) - XADM: How to Recover a Deleted Mailbox in Exchange 2000
- [Q296788](#) - XADM: Offline Backup and Restoration Procedures for Exchange 2000 Server
- [Q163713](#) - XADM: Recovering a Single Mailbox from the Online Backup
- [Q271886](#) - XADM: How to Use the Mbconn Utility to Generate Active Directory Accounts for Information Store Mailboxes

**For more information:** <http://www.microsoft.com/exchange/>

Does this paper help you? Please give us your feedback. On a scale of 1 (poor) to 5 (excellent), how do you rate this paper?

<mailto:exchdocs@microsoft.com?subject=Feedback: Mailbox Recovery for Microsoft Exchange 2000>

